**Keywords:**

* Serial Wire Debug (SWD) – 2-wire JTAG that allows uploading of code and running code debugging
  + SWDIO – Serial Wire Debug Input/Output pin
  + SWCLK – Serial Wire Clock pin
* Bootloader – A program that runs on boot-up which allows either code to run or allows one to upload code
* Debugger – Referencing the Analog Devices miDAS-Link debugger
* Flash – Uploading the code to the ADuCM355 into flash memory

Note: In order to make changes to or upload code to the M355, you need to download Keil Uvision5. I have been using the free version since our code is small, but if the embedded code starts to balloon then you may need to purchase a license.

**Setup:**

You will need a USB-to-JTAG converter which Aptitude has. It is a black box with cables labeled miDAS-Link by Analog Devices. Plug the USB to the computer and the JTAG plugs into the ADuCM355 Eval Board. This device allows heavy duty debugging but we are only using SWDIO/SWCLK/Power/Ground from the ribbon cable. If you wish to upload code to the ADuCM355 which is on the Raspberry Pi Hat, then you will need to find the pinout of the debugger, and attach those pin to the hat, power and ground of the debugger should go to 3v3 and GND respectively.

To upload the code:

* Open the Square Wave Voltammetry project in the ARM project which opens Keil uVision5
* Open the options for ADuCM355 by pressing Alt+F7, or Project -> Options for Target ‘AduCM355’
  + Under the Debug tab, click ‘Settings” on the upper right-hand corner (next to J-Link / J-TRACE Cortex)
  + Click “Flash Download” tab and make sure that “Reset and Run” has a checkmark on it
    - The Raspberry Pi has the reset button to the ADuCM355 which will need to be configured to reset the ADuCM355 after code upload.
  + Exit out of the options
* Compile the code by pressing F7, or Project -> Build Targets
* Flash/Upload the code by pressing F8, or Flash -> Download